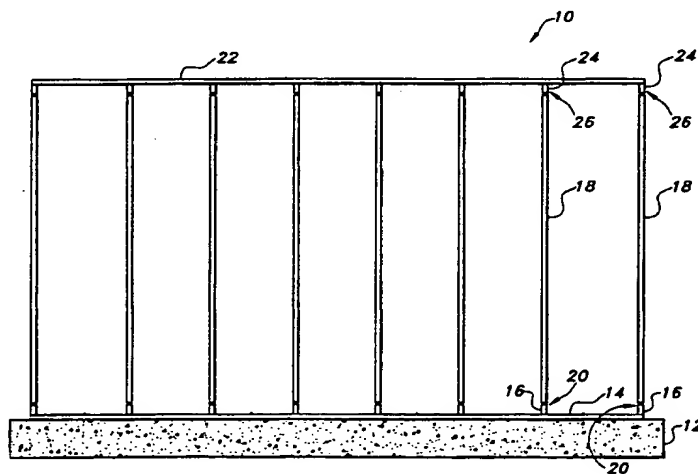




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup> :</b> <b>E04H 12/00</b>	<b>A3</b>	<b>(11) International Publication Number:</b> <b>WO 98/41706</b> <b>(43) International Publication Date:</b> 24 September 1998 (24.09.98)
<b>(21) International Application Number:</b> PCT/US98/05433 <b>(22) International Filing Date:</b> 19 March 1998 (19.03.98)  <b>(30) Priority Data:</b> 60/040,835                      19 March 1997 (19.03.97)                      US  <b>(71)(72) Applicants and Inventors:</b> SODER, James, T. [US/US]; 1994 Gallina Circle, Collierville, TN 38017 (US). OS- TRANDER, Bruce, K. [US/US]; 220 Revell Pointe North, Collierville, TN 38017 (US).  <b>(74) Agents:</b> HUMBLE, Deborah, S. et al.; Baker, Donelson, Bearman & Caldwell, 1800 Republic Centre, 633 Chestnut Street, Chattanooga, TN 37450-1800 (US).		<b>(81) Designated States:</b> BR, CA, ES, JP, US.  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims</i> <i>and to be republished in the event of the receipt of amendments.</i>  <b>(88) Date of publication of the international search report:</b> 3 December 1998 (03.12.98)

**(54) Title:** METAL FRAMING SYSTEM**(57) Abstract**

A system (10) and method are provided for framing at least a portion of a wide variety of structures (12). In each embodiment, the framing system (10) includes a base (14). The framing system (10) further includes a plurality of lower connecting members (16) attached to and extending upwardly from the base (14) and a plurality of upwardly extending support members (18) which are interconnected to the lower connecting members (16). The framing system (10) may further include an upper member (22) and a plurality of upper connecting members (24) attached to and extending downwardly from the upper member (22). Each of the support members (18) is also interconnected to one of the upper connecting members (24), which is aligned with one of the lower connecting members (16). One member has a reduced end portion (28, 30) which is inserted into a non-reduced end portion of the adjacent member.

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US98/05433

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) : E04H 12/00

US CL : 52/653.1

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 52/653.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,E	US 5,735,100 A (CAMPBELL) 07 APRIL 1998 (04/04/98), ENTIRE DOCUMENT	1-43
Y,P	US 5,655,344 A (MOEN ET AL) 12 AUGUST 1997 (12/08/97), ENTIRE DOCUMENT	1-43
Y,E	US 5,803,653 A (ZUFFETTI) 08 SEPTEMBER 1998 (08/09/98), ENTIRE DOCUMENT	1-43
Y	US 3,204,382 A (MCGURN) 7 SEPTEMBER 1965 (07/09/65), ENTIRE DOCUMENT	1-43

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E* earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*G* document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

08 SEPTEMBER 1998

Date of mailing of the international search report

14 OCT 1998

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

BETH AUBREY

Telephone No. (703) 308-2168

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

United States Patent and Trademark  
Office  
(Box PCT)  
Crystal Plaza 2  
Washington, DC 20231  
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

<b>Date of mailing (day/month/year)</b> 10 November 1998 (10.11.98)	
<b>International application No.</b> PCT/US98/05433	<b>Applicant's or agent's file reference</b> 787294-004
<b>International filing date (day/month/year)</b> 19 March 1998 (19.03.98)	<b>Priority date (day/month/year)</b> 19 March 1997 (19.03.97)
<b>Applicant</b> SODER, James, T. et al	

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

16 October 1998 (16.10.98)



in a notice effecting later election filed with the International Bureau on:

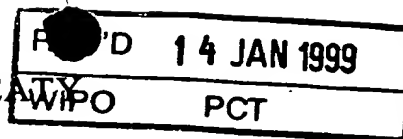
2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b> Lazar Joseph Panakal Telephone No.: (41-22) 338.83.38
--	---

## PATENT COOPERATION TREATY



## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 787294-004	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US98/05433	International filing date (day/month/year) 19 MARCH 1998	Priority date (day/month/year) 19 MARCH 1997
International Patent Classification (IPC) or national classification and IPC IPC(6): and US Cl.:		
Applicant SODER, JAMES T.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  16 OCTOBER 1998	Date of completion of this report  19 NOVEMBER 1998
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer <i>Beth Aubrey</i> BETH AUBREY
Facsimile No. (703) 305-3230	Telephone No. (703) 308-2168

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US98/05433

**I. Basis of the report**

1. This report has been drawn on the basis of *(Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments):*

- ☒ the international application as originally filed.
- ☒ the description, pages 1-31 , as originally filed.  
pages NONE , filed with the demand.  
pages NONE , filed with the letter of \_\_\_\_\_.  
pages \_\_\_\_\_ , filed with the letter of \_\_\_\_\_.
- ☒ the claims, Nos. 1-43 , as originally filed.  
Nos. NONE , as amended under Article 19.  
Nos. NONE , filed with the demand.  
Nos. NONE , filed with the letter of \_\_\_\_\_.  
Nos. \_\_\_\_\_ , filed with the letter of \_\_\_\_\_.
- ☒ the drawings, sheets/~~fig~~ 1-15 , as originally filed.  
sheets/~~fig~~ NONE , filed with the demand.  
sheets/~~fig~~ NONE , filed with the letter of \_\_\_\_\_.  
sheets/~~fig~~ \_\_\_\_\_ , filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

- ☒ the description, pages NA .
- ☒ the claims, Nos. NA .
- ☒ the drawings, sheets/~~fig~~ NA .

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the ~~Supplemental Box~~ Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:

NONE

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US98/05433

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>1-43</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-43</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-43</u>	YES
	Claims <u>NONE</u>	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 1-43 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest the system having the reduced portion joint as claimed, nor any motivation to do so.

\_\_\_\_\_ NEW CITATIONS \_\_\_\_\_

NONE

## PATENT COOPERATION TREATY

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## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 787294-004	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5	
International application No. PCT/US98/05433	International filing date (day/month/year) 19 MARCH 1998	(Earliest) Priority Date 19 MARCH 1997
Applicant SODER, JAMES T.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (See Box I).
2. ☐ Unity of invention is lacking (See Box II).
3. ☐ The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international search was carried out on the basis of the sequence listing
  - ☐ filed with the international application.
  - ☐ furnished by the applicant separately from the international application,
    - ☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.
  - ☐ transcribed by this Authority.
4. With regard to the title,
  - ☒ the text is approved as submitted by the applicant.
  - ☐ the text has been established by this Authority to read as follows:
5. With regard to the abstract,
  - ☐ the text is approved as submitted by the applicant.
  - ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the drawings to be published with the abstract is:  
Figure No. 1
  - ☒ as suggested by the applicant.
  - ☐ because the applicant failed to suggest a figure.
  - ☐ because this figure better characterizes the invention.

☐ None of the figures.



## Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The abstract is too long (PCT Rule 8.1(b)). The abstract must be less than 150 words, or 200 words when no Figure is to be published.

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

## NEW ABSTRACT

A system(10) and method are provided for framing at least a portion of a wide variety of structures(12). In each embodiment, the framing system(10) includes a base(14). The framing system(10) further includes a plurality of lower connecting members(16) attached to and extending upwardly from the base(14) and a plurality of upwardly extending support members(18) which are interconnected to the lower connecting members(16). The framing system(10) may further include an upper member(22) and a plurality of upper connecting members(24) attached to and extending downwardly from the upper member(22). Each of the support members(18) is also interconnected to one of the upper connecting members(24), which is aligned with one of the lower connecting members(16). One member has a reduced end portion(28,30) which is inserted into a non-reduced end portion of the adjacent member.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US98/05433

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : E04H 12/00

US CL : 52/653.1

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 52/653.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,E	US 5,735,100 A (CAMPBELL) 07 APRIL 1998 (04/04/98), ENTIRE DOCUMENT	1-43
Y,P	US 5,655,344 A (MOEN ET AL) 12 AUGUST 1997 (12/08/97), ENTIRE DOCUMENT	1-43
Y,E	US 5,803,653 A (ZUFFETTI) 08 SEPTEMBER 1998 (08/09/98), ENTIRE DOCUMENT	1-43
Y	US 3,204,382 A (MCGURN) 7 SEPTEMBER 1965 (07/09/65), ENTIRE DOCUMENT	1-43



Further documents are listed in the continuation of Box C.



See patent family annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\*

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\*

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\*

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

\*&amp;\*

document member of the same patent family

Date of the actual completion of the international search

08 SEPTEMBER 1998

Date of mailing of the international search report

14 OCT 1998

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks

Box PCT

Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

BETH AUBREY

Telephone No. (703) 308-2168